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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,388	08/05/2003	Jeroen Siebrand Wellen	Wellen 5	6522

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EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/634,388	WELLEN, JEROEN SIEBRAND	
	Examiner	Art Unit	
	M. R. Sedighian	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-13 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 5-9 and 14-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. This communication is responsive to applicant's 1/2/07 remarks. Claims 1-22 are now pending.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 10-13, and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US Patent No: 5,903,370).

Regarding claims 1, 10, and 19, Johnson teaches an optical access network (50, fig. 5B) including a plurality of optical network units (nodes A, B, C, D, fig. 5B) connected to an optical line terminal (col. 6, lines 34-43 and 45, figs. 5B) in a ring topology (47, 48, fig. 5B) in which the optical network units are connected together in series (network units A, B, C, D are connected to each other through fiber rings 47 and 48 in series), the optical line terminal (45, figs. 5B) being connected to the first optical network unit (A, fig. 5B) in the series and to the last optical network unit (D, fig. 5B) in the series, and wherein the connections are via a protection switch (51, figs. 5B, 6), the protection switch comprising: means for monitoring (RX, fig. 6) the connections from the optical network units to detect a loss of signal from an optical network unit (col. 4, lines 4-10), and a plurality of switching elements (65, 66, 67, 68, fig. 6), one for each optical network unit (col. 7, lines 62-67) responsive to detection of loss of signal from the respective optical network unit to switch the respective optical network unit out of the series

such that the continuity of the ring topology is maintained (col. 7, lines 8-18, col. 8, lines 59-67, col. 9, lines 1-5).

Regarding claims 2 and 11, Johnson further teaches the switching elements are cross-bar switches (optical switches 65-68 are cross bar switches).

Regarding claims 3 and 12, Johnson further teaches a plurality of photodetectors (RXs, fig. 6) are arranged to detect signals on the connection from a respective optical network unit (col. 4, lines 4-6).

Regarding claims 4 and 13, Johnson further teaches each photodetector is arranged to control its respective switching element directly (col. 4, lines 4-8, col. 7, lines 46-52 and RX, 65, fig. 6).

Regarding claim 20, Johnson teaches when an optical network unit is switched out, connecting together the connections to and from the optical network unit (col. 7, lines 8-18).

Regarding claim 21, Johnson teaches monitoring optical signals in the ring to detect loss of signal in the ring (col. 7, lines 46-51); and toggling switches in the protection switch in the event of a loss of signal in the ring to identify a faulty connection (col. 8, lines 59-67, col. 9, lines 1-12).

Regarding claim 22, Johnson teaches monitoring optical signals in the ring to detect malicious or unauthorized usage of an optical network unit (col. 7, lines 46-52); and responsive to the detection of malicious or unauthorized usage, switching the optical network unit subject to such usage out of the network (col. 7, lines 8-18).

4. Claims 5-9 and 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Applicant's arguments filed 1/12/07 have been fully considered but they are not persuasive.

Remark states Johnson does not teach each and every element recited in respective claims 1, 10, and 19 such as “means for monitoring the connections from the optical network units to detect a loss of signal from an optical network unit, and a plurality of switching elements, one for each optical network unit, responsive to the detection of loss of signal from the respective optical network unit to switch the respective optical network unit out of the series such that continuity of the ring topology is maintained”. However, Johnson teaches such limitations. Johnson teaches a means for monitoring the connections (col. 4, lines 4-10 and RX, fig. 6) from the optical network units (optical network units A, B, C, D of network 50, fig. 5) to detect a loss of signal from an optical network unit (col. 4, lines 4-10, col. 7, lines 46-52), and a plurality of switching elements (for example, switches 65, 66, 67, 68, shown in fig. 6), one for each optical network unit (each optical network unit A, B, C, and D has its own respective switches 65, 66, 67, 68), responsive to the detection of loss of signal from the respective optical network unit (col. 4, lines 4-10, col. 7, lines 46-52) to switch the respective optical network unit out of the series such that continuity of the ring topology is maintained (col. 7, lines 8-18, col. 8, lines 59-67, col. 9, lines 1-5). Remark further states in Johnson's figs. 5B and 6, there is no teaching regarding a protection switch for such optical network units (ONUs). Johnson discloses

in response to a fiber cut, optical restoration switches at respective nodes switches the traffic (col. 7, lines 8-12, 66-67), for example, in response to a fiber cut (fiber cut 59, fig. 5B), optical restoration switch 52 at node B switches East traffic, which would otherwise be sent to node C over the working pipe ring 47, to be sent over the spare pipe ring 48 in the opposite direction toward node A, and similarly for optical restoration switch 53 of node C (col. 7, lines 10-18). Accordingly, Johnson discloses protection switching in respective ONUs A, B, C, and D. Remark further states figs. 5B and 6 of Johnson do not show any switch providing connections between a line terminal and an ONU, or between two ONUs. However, optical restoration switches of Johnson providing connections between line terminals and respective ONUs of the ring network 50. For example, optical switches 51 of node A and its corresponding switches 65, 66, 67, 68 provide a connection between the line terminal 45 and the next ONU node B or D. In fig. 6 of Johnson, optical switch 51 is connected to optical line terminal 45A through its respective switches 65 and 67, and also connected to the next ONUs node B or D through its respective switches 66 and 68 and the line terminal 45B. Furthermore, claims 1, 10, and 19 do not recite the limitations that a switch provides connections between a line terminal and an ONU, or between two ONUs. Claims 1, 10, and 19, recite a plurality of switching elements, one for each optical network unit responsive to detection of loss of signal from the respective optical network unit, as discussed above. Remark further states neither switches 52 nor 53 switches any ONU out of the series, and if either node around the fiber cut, were to be switched out of the series, it would result in a discontinuity in the ring network. Johnson discloses restoration switches 52 and 53 that can route the traffic in an opposite direction away from a fiber cut toward the other node (col. 7, lines 8-18). For example, fiber cut 59 disrupts the series

connection of ONUs A, B, C, D, and causes node C to be disconnected from the series, wherein the traffic is routed in opposite direction from node B to node A and to node D, such that continuity of traffic is maintained in a counter-clockwise direction along the ring. Applicant's attention is directed that during the prosecution of a pending patent application, the terms found in the claims should be given the broadest reasonable interpretation, See *In re Pearson*, 181 USPQ 641 (CCPA 1974).

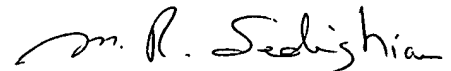
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



M. R. SEDIGHIAN
PRIMARY EXAMINER